
Mauna Loa Solar Observatory Observer's Log

Mon Mar 23 17:02:02 GMT 2015

Year: 15 Doy: 082

Observer: berkey

WEATHER COMMENT: berkey: Mon Mar 23 17:02:05 GMT 2015

temp 39f, wind 10mph from SW, cloudy skies

____end____

KCOR COMMENT BY berkey: Mon Mar 23 17:08:25 GMT 2015

Changed the calibration script to add darks at the begining of the calibration sequence

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____end____

GENERAL OBSERVATORY COMMENT BY berkey: Mon Mar 23 17:13:09 GMT 2015

leaving main dome closed until things approve.

____end____

GENERAL OBSERVATORY COMMENT BY berkey: Mon Mar 23 19:42:17 GMT 2015

Found a sucker hole starting Kcor and comp

____end____

Mon Mar 23 19:42:59 GMT 2015 COMP Start Patrol

Mon Mar 23 19:47:49 GMT 2015 KCOR Start Synoptic Patrol

Mon Mar 23 19:49:54 GMT 2015 KCOR End Patrol

Mon Mar 23 19:50:55 GMT 2015 KCOR Start Synoptic Patrol

Mon Mar 23 20:12:00 GMT 2015 KCOR End Patrol

Mon Mar 23 20:12:24 GMT 2015 CoMP Paused for clouds

GENERAL OBSERVATORY COMMENT BY berkey: Mon Mar 23 20:22:48 GMT 2015

Cirrus closing out the sucker hole.

____end____

Mon Mar 23 20:47:01 GMT 2015 CoMP Restarted from pause

Mon Mar 23 20:49:51 GMT 2015 KCOR Start Synoptic Patrol

KCOR COMMENT BY berkey: Mon Mar 23 20:47:12 GMT 2015

Found a bug in the MC4u gui that controls how the calpol position gets updated after a home. Some fraction of the time the calpol gets reported as 23.83+/-0.02 degrees in the fits header and MC4u gui, because the position was read out before the homeoffset was zeroed out. We then never polled the position of the calpol so its actual position was never updated. This fix adds periodic polling of the calpol angle like we do for the focus positions and prox sensors on the linear stages.

Additional info from Ben about the KCor calpol positions:

I have been digging through some of the calpol data for 2015, and you are right it looks like we report many bad positions in the headers.

I *think* I can explain most dispersion in values.

First the resolution of the encoder is better than the position accuracy of rotation mechanism so instead of 22.5000000 degrees we end up with: 22.49, 22.50, 22.51 and 22.52

I assume you aren't having a problem with these values.

The major problem I see is we are getting some positions reported before the home offset 23.83+/-0.01 was removed. I believe that any time we have seen the calpol at 23.83+/-2 degrees we can replace that number with 0. This morning I made a change to the way we update the calpol angle that should wait until after the offset is applied; which if it works means we shouldn't see the 23.83 offset value again.

After taking into account the +/-0.02 dispersion of results around the commanded 22.5 degree positions and the 23.83 homing errors the only weird result I see for Jan/Feb 2015 is a calpol position of 16.2 on the morning of Jan 23rd. I can't really explain where the 16.2 value came from. My guess is when we started taking data the calpol had been homed and was sitting at the 0 position and just reporting a funky position. My only basis for this is the 22.5 degree moves in the calibration sequence aren't absolute moves to 22.5, 45,..... but 22.5 degrees from the current position. And once the calibration had started we started to see values on the 0+22.5+22.5 sequence not the 16.2+22.5+22.5 sequence. This is a little scary since we get this unexplained value, but if the calpol really was at 0 degrees before starting the observing program my changes to address the 23.83 value getting into the data would have zipped this 16.2 value as well.

So going forward I will monitor the calpol angles reported in the fits to make sure these changes worked.

____end____
Mon Mar 23 20:56:17 GMT 2015 KCOR End Patrol
Mon Mar 23 20:56:18 GMT 2015 KCOR Start Calibration script: c:\kcor\mlso-calibration22deg-20150323.ini
Mon Mar 23 21:00:14 GMT 2015 CoMP Paused for clouds
KCOR COMMENT BY berkey: Mon Mar 23 20:59:57 GMT 2015
This cal will be bad, clouds moved in quicker then I expected.
____end____
Mon Mar 23 21:13:18 GMT 2015 KCOR End Calibration Script
Mon Mar 23 21:13:35 GMT 2015 KCOR Start Synoptic Patrol
Mon Mar 23 21:13:36 GMT 2015 KCOR Start Synoptic Patrol
Mon Mar 23 22:04:16 GMT 2015 CoMP Restarted from pause
Mon Mar 23 22:04:16 GMT 2015 COMP End Patrol
Mon Mar 23 23:29:15 GMT 2015 COMP Start Patrol
Mon Mar 23 23:32:45 GMT 2015 KCOR Start Synoptic Patrol
Tue Mar 24 00:20:39 GMT 2015 KCOR End Patrol
Tue Mar 24 00:20:40 GMT 2015 KCOR Start Calibration script: c:\kcor\mlso-calibration22deg-20150323.ini
Tue Mar 24 00:37:43 GMT 2015 KCOR End Calibration Script
Tue Mar 24 00:38:00 GMT 2015 KCOR Start Synoptic Patrol
Tue Mar 24 00:38:00 GMT 2015 KCOR Start Synoptic Patrol
Tue Mar 24 00:48:31 GMT 2015 KCOR End Patrol
Tue Mar 24 00:49:00 GMT 2015 CoMP Paused for clouds
Tue Mar 24 00:49:41 GMT 2015 CoMP Restarted from pause
GENERAL OBSERVATORY COMMENT BY berkey: Tue Mar 24 00:49:45 GMT 2015
Spar hit the orange ladder. Restarting observing.
____end____
Tue Mar 24 00:50:41 GMT 2015 KCOR Start Synoptic Patrol
Tue Mar 24 01:41:54 GMT 2015 KCOR End Patrol
Tue Mar 24 01:42:14 GMT 2015 CoMP Paused for clouds
Tue Mar 24 01:48:18 GMT 2015 CoMP Restarted from pause
GENERAL OBSERVATORY COMMENT BY berkey: Tue Mar 24 01:48:24 GMT 2015
Moved the lower shutter up while that cloud passed.
____end____
Tue Mar 24 01:49:30 GMT 2015 KCOR Start Synoptic Patrol
Tue Mar 24 01:50:14 GMT 2015 COMP End Patrol
CoMP COMMENT BY berkey: Tue Mar 24 01:50:05 GMT 2015
Re-aligning the comp occulter.
____end____
Tue Mar 24 01:50:43 GMT 2015 COMP Start Patrol
Tue Mar 24 03:20:44 GMT 2015 COMP End Patrol
Tue Mar 24 03:23:00 GMT 2015 KCOR End Patrol
GENERAL OBSERVATORY COMMENT BY berkey: Tue Mar 24 03:31:26 GMT 2015
The afternoon clear up a bit. However the skybrightness/haze wasn't great and got worse in the last hour.
____end____